

Appendix: claims as pending upon entry of the amendment.

1. (amended) A non-human transgenic animal [having binding to] genetically engineered to express a syndecan or proteoglycan portions thereof [the melanocortin 4 receptor function inactivated], wherein the animal is characterized by an obese phenotype.
2. (amended) The animal of claim 1 wherein the animal expresses a [molecule] syndecan from a genetically engineered construct stably integrated into its genome [wherein the molecule binds to the melanocortin 4 receptor].
3. (amended) The animal of claim 2 wherein the molecule is [a] syndecan -1.
4. (amended) The animal of claim 2 wherein the [molecule] syndecan is expressed preferentially in the areas of the hypothalamus responsible for the regulation of body weight and energy balance.
5. The animal of claim 4 having incorporated therein a construct including a cytomegalovirus promoter or portion thereof including the intermediate/early enhancer.
6. The animal of claim 1 having the genotype FVB/N-TgN(synd-1).
7. (amended) A genetically engineered construct for making a transgenic animal comprising a promoter and a nucleic acid molecule encoding a syndecan, wherein the syndecan is preferentially expressed in the regions of the hypothalamus responsible for the regulation of body weight and energy balance.
8. The construct of claim 7 wherein the promoter is the cytomegalovirus promoter or a functional portion thereof including the intermediate/early enhancer.
9. The construct of claim 7 wherein the syndecan is syndecan-1.
10. (amended) A method for screening for compounds which can alter body weight comprising
administering a compound to a non-human transgenic animal genetically engineered to express a syndecan or proteoglycan portions thereof [having binding to the melanocortin 4 receptor function inactivated], wherein the animal is characterized by an obese phenotype., and observing whether there is a change in body weight over a period of time.
11. (amended) The method of claim 10 wherein the animal expresses a [molecule] syndecan from a genetically engineered construct stably integrated into its genome [wherein the molecule binds to the melanocortin 4 receptor].
12. (amended) The method of claim 10 wherein the [molecule] syndecan is [a] syndecan -1.
13. (amended) The method of claim 11 wherein the [molecule] syndecan is expressed preferentially in the areas of the hypothalamus responsible for the regulation of body weight and energy balance.
14. The method of claim 13 wherein the animal has incorporated therein a construct including a cytomegalovirus promoter or portion thereof including the intermediate/early enhancer.
15. The method of claim 14 wherein the animal has the genotype FVB/N-TgN(synd-1).